METHOD AND APPARATUS FOR MONITORING DRUG EFFECTS ON CARDIAC ELECTRICAL SIGNALS USING AN IMPLANTABLE CARDIAC STIMULATION DEVICE

Abstract of the Disclosure

An implantable cardiac stimulation device, such as a pacemaker or Implantable Cardioverter Defibrillator, is configured to automatically monitor the effects of antiarrhythmic drugs on cardiac electrical signals within a patient to verify the efficacy of the drugs taken. In one example, an analysis of patient cardiac electrical signals is performed by comparing the cardiac electrical signals with values representative of the effects of different classes of antiarrhythmic drugs. If the implantable device determines that the prescribed antiarrhythmic drugs have not been effective, a warning signal is generated. The warning signal is conveyed directly to the patient via a bedside monitor and to the patient's physician via remote connection to an external programmer device so that both are notified of the drug efficacy problems. Additionally, the implantable device may be configured to automatically adjust pacing and defibrillation control parameters in an attempt to compensate for any lack of efficacy in the drugs. For example, the aggressiveness of overdrive pacing may be increased. Alternatively, a drug pump is controlled to adjust the dosage of antiarrhythmic drugs if an initial dosage is found to be ineffective.